

## Cutters Give You More Production When You Give Them More Care

Make cutters last longer and serve better by correct handling and sharpening as well as by proper care in operation.

Cutters are scarce these days—they need extra care so that the production requirements for our armed forces can be maintained.



# BROWN & SHARPE CUTTERS



## HIGGINS AMERICAN DRAWING INKS *Precision Inks for Precise Performance*

It is not fantasy when we say this night fighter including engine, propeller and instruments was built from plans drawn with Higgins American Drawing Inks. It may have been assembled from isometric drawings made with Higgins Ink in a building erected from plans drawn with Higgins Ink and its parts were made with machine tools built from Higgins Ink designs. It takes off from an air field plotted and mapped with Higgins Ink. It lands by a radio beam from a sending apparatus the parts of which were planned with Higgins Ink and so on endlessly. • When so much depends on quality, we are proud to state that millions of users agree "Higgins" is the undisputed champion of precise performance.

**HIGGINS INK CO., INC.**  
271 NINTH STREET • BROOKLYN, N. Y.

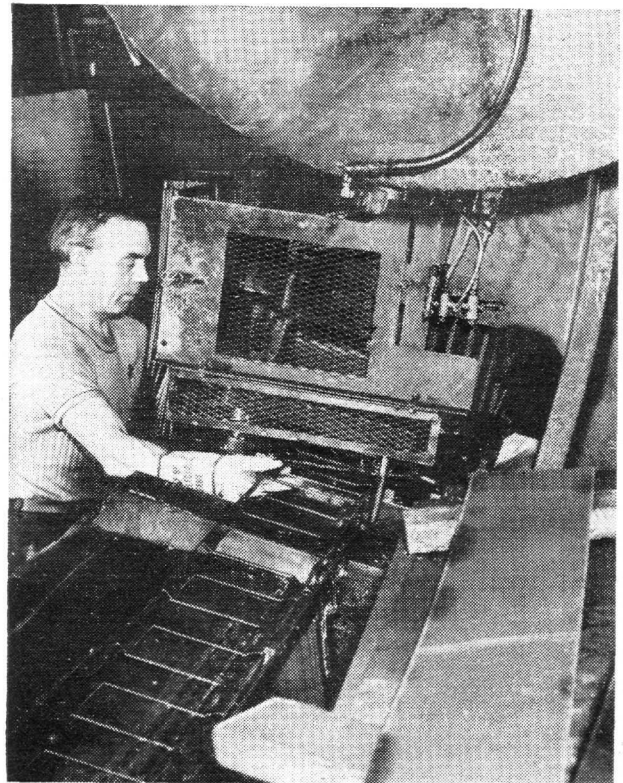
## METHOD OF "CUT AND TRY" SAVES TONS OF STEEL

A technique of "cut and try" is helping to solve one of war industry's toughest problems—the scarcity of vital materials.

After the designs for a new product have been engineered, blueprints specifying the size, shape and thickness of parts are furnished the planning department. One of the many responsibilities of the department is the development of methods of obtaining the greatest number of parts from the smallest amount of materials. The best possible nesting arrangements for such simple shapes as squares, triangles and circles can be expressed in simple formulas so that, given the measurement of a part, a planning man can check readily the ideal length and width of material from which they are to be cut.

When the layout is finished, it is sent to the factory for guidance in cutting. Power-driven shears, punches, and sometimes gas torches are used for cutting or stamping out the parts.

Often, complicated parts differing widely in size and shape must be nested together, so the planning department uses the "cut and try" method. The parts are drawn to scale on ordinary white paper and are nested together as closely as possible. This way, they can get the parts as closely together as possible, without wasting material.



—Courtesy General Electric.

*Saving stock by nesting pole piece stampings on the punch press.*